Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE ork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number. Under the Pape Substitute for 1997 Complete if Known **Application Number** 10/593,212 Filing Date September 18, 2006 First Named Inventor Andrew Bruce Holmes

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	Group Art Unit	Unknown	
ĺ	Examiner Name	Unknown	
	Attorney Docket Number	065425 0094 11500	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
	ETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, olume-issue numbers(s), publisher, city and/or country where published.				
	catalysed reaction of sodium methoxide with aryl bromices. A mechanistic of anisole derivatives," Tetrahedron (1989) 45(17):5565-5578				
	arency of imageable fluoropolymers at 157nm by incorporation of toresist backbones," Chem. Mater. (2002) 14:1306-1313				
BAIKER, A., "Supercritical fluids i	in heterogeneous catalysis," Chem. Rev. (1999) 99:453-473				
CARROLL, M.A. et al., "Palladiun Chem. Commun. (1998) 1395-1396	n-catalysed carbon-carbon bond formation in supercritical carbon dioxide,"				
COOPER, A.I., "Recent developme (2001) 13:1111-1114	ents in materials synthesis and processing using supercritical CO2," Adv. Mater.				
	am-catalyzed heck reaction on 1-alkoxy-1,3-dienes: a regioselective γ-arylation bunds," Org. Lett. (2003) 5(21):3815-3817				
EARLY, T.R. et al., "Palladium-cat Commun. (2001) 1966-1967	talysed cross-coupling reactions in supercritical carbon dioxide," Chem.				
FURSTNER, A. et al., "Olefin meta 9006	athesis in supercritical carbon dioxide," J. Am. Chem. Soc. (2001) 123:9000-				
GORDON, R.S. et al., "Palladium-rearbon dioxide," Chem. Commun. (	mediated cross-coupling reactions with supported reagents in supercritical (2002) 640-641				
	Include name of the author (in CAPITAL L symposium, catalog, etc. ), date, pages(s), volume and the symposium, catalog, etc. ), date, pages(s), volume and the symposium, catalog, etc. ), date, pages(s), volume and the symposium, catalog, etc. ), date, pages(s), volume and the symposium, catalog, etc. ), date, pages(s), volume and the symposium, catalog, etc. ), date, pages(s), volume and the symposium and the symposium and the symposium, catalog, etc. ), date, pages(s), volume and the symposium and the symposiu				

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September 18, 2006	Filing Date					
Andrew Bruce Holmes	First Named Inventor	STATEMENT BY APPLICANT				
Unknown	Group Art Unit					
Unknown	Examiner Name	(use as many sheets as necessary)				
065435-9084 US00	Attorney Docket Number	Sheet 2 of 5				
Unknown	Examiner Name					
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Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the anicle (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.					
/SB/	HALLS, J.J.M. et al., "Efficient photodiodes from interpenetrating polymer networks," Nature (1995) 376:498-500					
	HARTWIG, J.F., "Transition metal catalyzed synthesis of arylamines and aryl ethers from aryl halides and triflates: scope and mechanism," Angew. Chem. Int. Ed. (1998) 37:2046-2067					
	HOGGAN, E.N. et al., "Spin coating and photolithography using liquid and supercritical carbon dioxide," Polym. Prep. Am. Chem. Soc. Div. PMSE (1999) 81:218					
	JESSOP, P.G. et al., Chemical Synthesis Using Supercritical Fluids, Wiley-VCH: Weinheim (1999)					
	KISSLING, R.M. et al., "Recent developments in the use of N-heterocyclic carbenes: applications in catalysis," (2003) Chapter 27, 323-341					
	KITANI, A. et al., "'Polyaniline': formation reaction and structure," Synthetic Metals (1987) 18:341-346					
	KUWABARA, Y. et al., "Thermally stable multilayered organic electroluminescent devices using novel starburst molecules, 4,4',4"-tri(N-carbazolyl)triphenylamine (TCTA) and 4,4',4"-Tris(3-methylphenylphenylamino)triphenylamine (m-MTDATA), as hole-transport materials," Adv. Mater. (1994) 6(9):677					
	LEY, S.V. et al., "Polyurea-encapsulated palladium(II) acetate: a robust and recyclable catalyst for use in conventional and supercritical media," Chem. Commun. (2002) 1134-1135					
$\bigvee$	LINDLEY, J., "Copper assisted nucleophilic substitution of aryl halogen," Tetrahedron (1984) 40(9):1433-1456					

Examiner	/0 15 /	Date	10/18/2007	
Signature	/Samuel Barts/	Considered	10/10/2007	

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/SB/	LU, FL. et al., "Phenyl-capped octaaniline (COA): an excellent model for polyaniline," J. Am. Chem. Soc. (1986) 108:8311-8313					
	MACDIARMID, A.G. et al., "Polyaniline: a new concept in conducting polymers," Synthetic Metals (1987) 18:285-290					
	MACDIARMID, A.G. et al., "Polyanilines: a novel class of conducting polymers," Faraday Discuss. Chem. Soc. (1989) 88:317-332					
	MACDIARMID, A.G. et al., "The polyanilines: potential technology based on new chemistry and new properties," Science and Applications of Conducting Polymers; Hilger: New York (1991) 117-127					
	OAKES, R.S. et al., "The use of supercritical fluids in synthetic organic chemistry," J. Chem. Soc. Perkin Trans. (2001) 1:917-941					
	PAINE, A.J., "Mechanisms and models for copper mediated nucleophilic aromatic substitution. 2. A single catalytic species from three different oxidation states of copper in an Ullmann synthesis of triarylamines," J. Am. Chem. Soc. (1987) 109:1496-1502					
	RAY, A. et al., "Polyaniline: doping, structure and derivatives," Synthetic Metals. (1989) 29:E141-E150					
	SHEZAD, N. et al., "Pd-catalysed coupling reactions in supercritical carbon dioxide and under solventless conditions," Green Chem. (2002) 4:64-67					
$\downarrow$	SHEZAD, N. et al., "Pd-catalyzed coupling reactions in supercritical carbon dioxide," Chemical Industries (Dekker) (2001) 82:459-464					

Examiner /Samuel Barts/ Signature	Date Considered	10/18/2007
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/SB/	SMITH, C.J. et al., "Palladium catalysed aryl amination reactions in supercritical carbon dioxide," Org. Biomol. Chem. (2005) 3:3767-3781
	SMITH, C.J. et al., "Palladium catalyzed cross-coupling reactions of silylamines," Chem. Commun. (2004) 1976-1977。 エルリンロー
	STOLKA, M. et al., "Hole transport in solid solutions of a diamine in polycarbonate," J. Phys. Chem. (1984) 88:4707-4714
	STRUKELJ, M. et al., "Organic multilayer white light emitting diodes," J. Am. Chem. Soc. (1996) 118:1213-1214
	SUNDARARAJAN, N. et al., "Supercritical CO2 processing for submicron imaging of fluoropolymers," Chem. Mater. (2000) 12:41-48
	TAMAO, K. et al., "Introduction to cross-coupling reactions," Topics in Curr. Chem. (2002) 219:1-9
	UETA, E. et al., "Glass formation and phase transition of novel π-electron starburst molecules, 1,3,5-tris(phenyl-2-thienylamino)benzene and 1,3,5-tris(phenyl-3-thienylamino)benzene," Chem. Lett. (1994) 2397-2400
	VACHON, D. et al., "Polyaniline is poly-para-phenyleneamineimine: proof of structure by synthesis," Synthetic Metals (1987) 18:297-302
$\overline{\downarrow}$	WEINGARTEN, H., "Ullmann condensation," J. Org. Chem. (1964) 29:975-977

Examiner	/Samuel Barts/	Date	40/40/0007	•
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/SB/	WELLS, S.L. et al., "CO2 technology platform: an important tool for environmental problem solving," Angew. Chem. Int. Ed. (2001) 40:518-527						
	WOLFE, J.P. et al., "Rational development of practical catalysts for aromatic carbon - nitrogen bond formation," Accounts of Chem. Res. (1998) 31(12):805-818						
$\downarrow$	YANG, B.H. et al., "Palladium-catalyzed amination of aryl halides and sulfonates," J. Organometallic Chem. (1999) 576:125-146						

Examiner /Samuel Barts/	Date Considered	10/18/2007
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			U.S. Paten	t Documents		
Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document		Date of Publication of Cited  Document	
/SB/		5,576,460	Buchwald et al.		11/19/1996	
V		6,156,933		Poliakoff et al.	12/5/2000	
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FOREIGN PATENT DOCUMENTS							
Examine Initials	r	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
/SE	3/	EP	0652202	Research Development Corporation of Japan	5/10/1995		
		wo	94/06738	Unichema Chemie BV et al.	3/31/1994		
		·wo	94/20444	Valtion Teknillinen et al.	9/15/1994		
	1	wo	95/22591	Degussa et al.	8/24/1995		
		wo	96/01304	Paul Moeller Ledelses Og Ingen	1/18/1996		
		wo	02/051958	Johnson Matthey PCL et al.	7/4/2002		]
		wo	02/28983	Cambridge Display Technology et al.	4/11/2002		
		wo	WO 02/45868 University of Cambridge 6/13/2002 Technology et al.				
		wo	03/009936	Holmes et al.	2/6/2003		
V		wo	03/018531	Polychip Pharmaceuticals Pty Ltd. et al.	3/6/2003		

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